

CLAIMS:

1. An electrophoretic display panel (1), for displaying a picture corresponding to image information, comprising:

-a plurality of pixels (2), each containing an amount of an electrophoretic material comprising charged particles (6, 7), being dispersed in a fluid (11);

5 -a first and a second electrode (8, 9) associated with each pixel (4) for receiving a potential difference as defined by an update drive waveform; and

-drive means (10), for controlling said update drive waveform of each pixel (4);

wherein the charged particles (6,7), depending on the applied update drive waveform, are able to occupy a position being one of extreme positions near the electrodes (8,9) and

10 intermediate positions in between the electrodes (8,9) for displaying the picture, and wherein said update drive waveform essentially comprises:

- a first shaking portion (S1), being data-independent,

-a reset portion (R), during which a reset signal is applied over the pixel,

-a second data-independent shaking portion (S2) being data-independent and subsequently

15 -a driving portion (D), during which a picture potential difference is applied over the pixel for enabling the particles (6, 7) to occupy the position corresponding to the image data information,

characterized in that the polarity of said first shaking portion (S1) is opposite the polarity of the second shaking portion (S2).

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2. An electrophoretic display panel as in claim 1, wherein each of the shaking portions (S1, S2) comprises an even number of shaking pulses.

3. An electrophoretic display panel as in claim 1 or 2, wherein the update drive
25 waveform further comprises an additional drive pulse (DP) after the second shaking portion (S2).

4. An electrophoretic display panel as in claim 3, wherein said update drive waveform is arranged to be used for transitions from one greyscale to the same greyscale.

5. An electrophoretic display panel as in claim 3 or 4, where the additional drive pulse (DP) has a polarity such as to move the particles (6,7) towards an extreme optical state being closest to their present optical state.

6. An electrophoretic display panel as in any one of the preceding claims, wherein the update drive waveform further comprises an additional reset pulse (RP) before said second shaking portion (S2) and an additional drive pulse (DP) after second shaking portion (S2).

7. An electrophoretic display panel as in claim 6, wherein said additional reset pulse (RP) and said additional drive pulse (DP) have opposite polarity.

8. An electrophoretic display panel as in claim 6 or 7, where the additional drive pulse (DP) has a polarity such as to move the particles (6,7) towards an extreme optical state being closest to their present optical state.

9. An electrophoretic display panel as in claim 6, 7 or 8, wherein said additional reset pulse (RP) and said additional drive pulse (DP) are of equal length.

10. An electrophoretic display panel as in claim 6, 7 or 8, wherein said additional drive pulse (DP) is longer than said additional reset pulse (RP).

11. Drive means for driving an electrophoretic display device, the device comprising a plurality of pixels (2), each containing an amount of an electrophoretic material comprising charged particles (6, 7) being dispersed in a fluid (11), and a first and a second electrode (8, 9) associated with each pixel (4) for receiving a potential difference as defined by an update drive waveform,

the drive means being arranged to control the update drive waveform, wherein the update drive waveform comprises:

- a first shaking portion, being data independent,
- a reset portion (R), during which a reset signal is applied over the pixel,

- a second data-independent shaking portion (S2) being data-independent and subsequently enabling the particles (6, 7) to occupy the position corresponding to image data information

characterized in that the polarity of said first shaking portion (S1) is opposite
5 the polarity of the second shaking portion (S2).